

Claims:

What is claimed is:

1. A method of interfacing a telephony appliance to a telephone switching system, the method comprising steps of:
 - a. providing a signal path for communicating signals between the telephony appliance and the telephone switching system;
 - b. identifying a communication protocol utilized by the telephony appliance from among a plurality of communication protocols; and
 - c. configuring the signal path according to the protocol.
2. The method according to claim 1 wherein the signal path includes a converter for converting digital voice samples into an analog signal.
3. The method according to claim 1 wherein the signal path is utilized for communicating voice and control signals between the telephony appliance and the telephone switching system.
4. The method according to claim 3 further comprising a step of detecting an on-hook/off-hook condition of the telephony appliance.
5. The method according to claim 4 further comprising a step of providing an indication of the on-hook/off-hook condition of the telephony appliance to the telephone switching system via the signal path in response to the telephony appliance changing from an on-hook condition to an off-hook condition.
6. The method according to claim 4 further comprising a step of providing an indication of the on-hook/off-hook condition of the telephony appliance to the telephone

3 switching system via the signal path in response to the telephony appliance changing from an off-hook condition to an on-hook condition.

1 *A*. An interface apparatus for interfacing a telephony appliance to a telephone
2 switching system, the interface apparatus comprising:
3 a. a signal path through the apparatus for communicating signals between the
4 telephony appliance and the telephone switching system; and
5 b. means for identifying a communication protocol utilized by the telephony
6 appliance from among a plurality of communication protocols and for configuring
7 the signal path according to the protocol.

8. The interface device according to claim 7 wherein the signal path includes a converter for converting the digital samples into an analog signal.

9. The interface device according to claim 7 wherein the signal path is utilized for communicating voice and control signals between the telephony appliance and the telephone switching system.

10. The interface device according to claim 9 comprising a circuit for detecting an on-hook/off-hook condition of the telephony appliance and for providing a notification to the telephone switching system in response to a change in the on-hook/off-hook condition of the telephony appliance.

11. A method of interfacing a telephony appliance to a telephone switching system, the method comprising steps of:

3 a. providing a signal path for communicating signals between the telephony
4 appliance and the telephone switching system;
5 b. identifying a communication protocol utilized by the telephony appliance from

6 among a plurality of communication protocols;

7 c. identifying a communication protocol utilized by the telephone switching system
8 from among a plurality of communication protocols; and

9 d. configuring the signal path according to the protocol utilized by the telephony
10 appliance and according to the protocol utilized by the telephone switching
 system.

1 12. The method according to claim 11 wherein the signal path includes a converter for
 converting digital voice samples into an analog signal.

1 13. The method according to claim 11 wherein the signal path is utilized for
 communicating voice and control signals between the telephony appliance and the telephone
 switching system.

1 14. The method according to claim 13 further comprising a step of detecting an on-
 hook/off-hook condition of the telephony appliance.

1 15. The method according to claim 14 further comprising a step of providing an
 indication of the on-hook/off-hook condition of the telephony appliance to the telephone
 switching system via the signal path in response to the telephony appliance changing from an on-
 hook condition to an off-hook condition.

1 16. The method according to claim 14 further comprising a step of providing an
2 indication of the on-hook/off-hook condition of the telephony appliance to the telephone
3 switching system via the signal path in response to the telephony appliance changing from an
 off-hook condition to an on-hook condition.

1 17. A method of interfacing a telephony appliance to a telephone switching system,

2 the method comprising steps of:

3 a. determining whether the telephone switching system communicates voice signals
4 as digital samples or as analog signals;

5 b. determining whether the telephony appliance communicates voice signals as
6 digital samples or as analog signals;

7 c. activating a first signal path through the apparatus when the telephone system
8 communicates voice signals as digital samples, the first signal path for
9 communicating the voice signals between the telephony appliance and the
10 telephone switching system wherein the first signal path includes a converter for
11 converting the digital samples into an analog signal; and

12 d. activating a second signal path through the apparatus when the telephone system
13 communicates voice signals in analog format, the second signal path for
14 communicating the voice signals between the telephony appliance and the
15 telephone switching system wherein the second signal path includes analog signal
16 processing circuits.

17. The method according to claim 17 further comprising a step of adapting an active
18. one of the first and second signal paths according to requirements of the telephone switching
19. system.

20. The method according to claim 17 further comprising a step of adapting the
21. second signal path according to requirements of the telephone switching system wherein the step
22. of adapting comprises a step of adjusting an amplification level according to a level of a dial tone
23. provided by the telephone switching system.

24. The method according to claim 17 wherein the step of determining includes a step
25. of measuring a first voltage supplied by the telephone switching system to a resistive load.

1 21. The method according to claim 20 wherein the step of determining further
2 comprises a step of measuring a second voltage supplied by the telephone switching system
under unloaded conditions.

1 22. The method according to claim 21 wherein the step of determining further
2 comprises a step of comparing a ratio of the first and second voltages to a range of expected
ratios.

1 23. The method according to claim 17 further comprising a step of identifying a
communication protocol utilized by the telephone switching system.

24. The method according to claim 23 further comprising a step of detecting an on-
hook/off-hook condition of the telephony appliance.

25. The method according to claim 24 further comprising a step of providing an
indication of the on-hook/off-hook condition of the telephony appliance to the telephone
switching system in accordance with the identified protocol in response to the telephony
appliance changing from an on-hook condition to an off-hook condition.

26. The method according to claim 24 further comprising a step of providing an
indication of the on-hook/off-hook condition of the telephony appliance to the telephone
switching system in accordance with the identified protocol in response to the telephony
appliance changing from an off-hook condition to an on-hook condition.

1 27. A method of interfacing a telephony appliance to a telephone switching system,
2 the method comprising steps of:
3 a. determining a communication protocol of the telephone switching system;
4 b. determining a communication protocol of the telephony appliance; and

PATENT
Attorney Docket No. HELLO-05006

5 c. translating a communication according to communication protocol of the
6 telephone switching system and further according the communication protocol of
7 the telephony appliance.